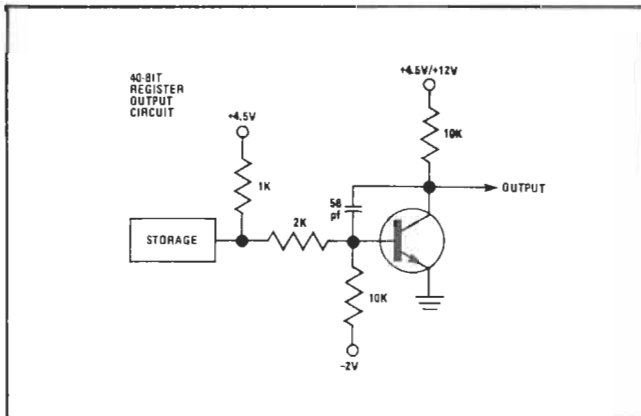
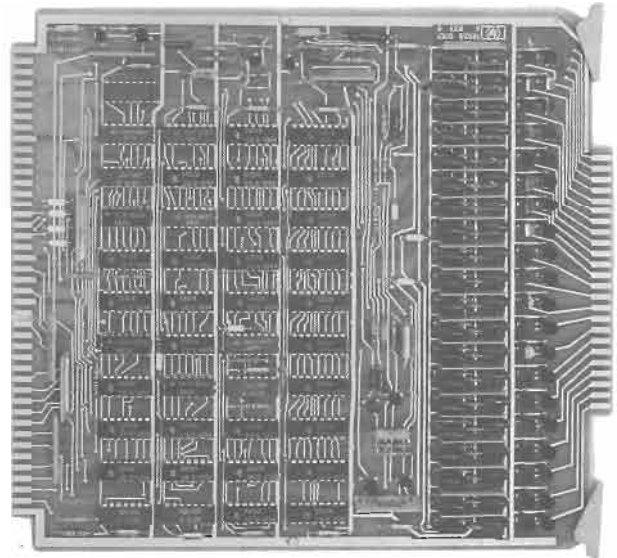


**Features**

- 40 bit (10 BCD digit) capacity
- Choice of ASCII or binary assembly modes
- Includes recorder command-holdoff interface

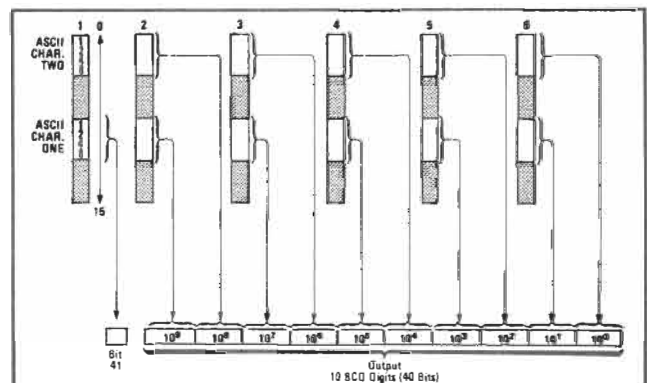
**Description**

The 12556B is an output interface with 40-bit capacity for driving program input lines of non-HP-1B stimulus or measuring instruments, control panel indicators or control lines, or HP model 5055A or 5050B Digital Recorders connected to HP 96MX or HP 1000 Model 31 or Model 81 Computer Systems.

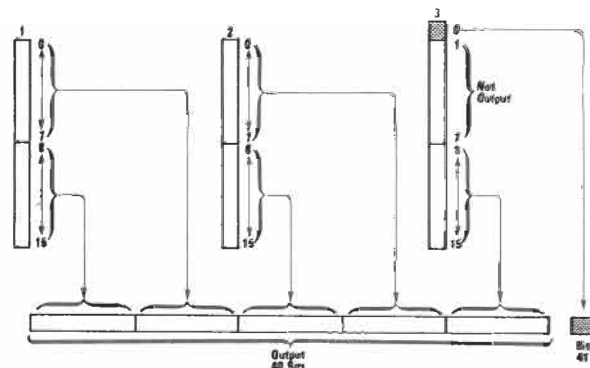


**ASSEMBLY OF OUTPUT**

The 40-bit register offers a choice of ASCII and binary output modes. In ASCII mode, the register assembles the BCD portion of ASCII characters from six words (12 bytes) in computer memory, as shown in Figure 1, to form a 41-bit output (10 BCD digits plus control bit). In binary mode, the register output is assembled from three words (six bytes) or memory, as shown in Figure 2.



Output Assembly in ASCII Mode  
Figure 1



Output Assembly in Binary Mode  
Figure 2



# Specifications

## Data Output

No. of Bits: 40 data bits and one control bit.

"1" Level: +12V/+4.5V, jumper-selectable, through 10k $\Omega$ .

"0" Level: 0V, 10 mA max. current sink.

## Reference Voltages

Positive: +9V/+3.33V, jumper-selectable, 110 $\Omega$  impedance.

Negative: +1V/+0.37V, jumper-selectable, 44 $\Omega$  impedance.

## Command Output

Standard: 50  $\mu$ s pulse from <+1V to +7.8V.

Option 002 Negative Command: 50  $\mu$ s pulse from >+5V/+7.8V, jumper-selectable, to <+1V. May be changed to positive command by changing jumper.

## Flag (Positive Hold-Off) Input From External Device

Standard: +7V to +15V, 2.3 mA, minimum, from -0.7V or open circuit state. Return to ground or open circuit state sets flag.

Option 002: +4.5V to +15V, 2.2 mA, minimum, from -0.7V or open circuit state. Return to ground or open circuit state sets flag.

## Status (Negative Hold-Off) Input From External Device

-3V to -30V, 0.61 mA, minimum, from +5V open circuit state. (This input from 5050A/B recorder remains in hold-off state when recorder is out of paper.)

## Output Presetting

Power On: turn-on of computer power presets all output bits to "0" state.

Programmed: All output bits can be program-preset to either "1" or "0".

## Override Timer

Timing: sets flag after 300 milliseconds if external device has not returned flag.

Status: bit 3 to input bits is set if override timer has set flag.

## Output Assembly Modes

ASCII Mode: bits 11-8 and 3-0 from 16-bit computer words are assembled to form the output (see Figure 1).

Binary Mode: All bits of 16-bit computer words form the output, most significant bit first.

Mode Selection: by jumpers and programming.

## Computer I/O Channels Used

One.

## Interface Current Required

0.01A (-12V), 0.08A (-2V), 0.9A (+4.5V), 0.15A (+12V).

## Memory Required For RTE Driver

500 bytes; 640 bytes when called from Multi-User Real-Time BASIC.

## Prerequisite

The performance test routines must be read into the system via the 12925A Punched Tape Reader Subsystem; therefore the HP 1000 Model 31 or Model 81 Computer System must have the punched tape reader before it can use the 12556B 40-Bit Register.

## HARDWARE FURNISHED

1. 40-Bit Register, positive true (12556-6002).
2. Mating connector kit (5060-8339).

## SOFTWARE FURNISHED

Output Register Test Routine on punched tape (20348-60001).

## SOFTWARE USED

The 40-Bit Register uses driver DVR54, included with the 92066A RTE Measurement and Control Drivers Package.

## MANUAL FURNISHED

Interface Manual (12556-9002).

## ORDERING INFORMATION

### Options

001: Substitutes cable (02547-6040) for connection to 5050A/B, 5055A, or 562AR Digital Recorder in place of mating connector kit.

002: Replaces standard positive true 40-Bit Register, interface manual, and test routine with:

1. 40-Bit Register, ground true (12556-60022).
2. Test connector (12556-60023).
3. Test cable (12556-60024).
4. Output register diagnostic routine on punched tape (29026-60001).
5. Interface manual (12556-90028).

## INSTALLATION

Installation of the 12556B is the responsibility of the customer. HP installation assistance is provided on request, at prevailing rates.

Specifications subject to change without notice.



For more information, call your local HP Sales Office or East (301) 948-6370 • Midwest (312) 677-0400 • South (404) 434-4000 • West (213) 877-1281. Or write: Hewlett-Packard, 1501 Page Mill Road, Palo Alto, CA 94304. In Canada: 275 Hymus Blvd., Point Claire, Quebec. In Europe: Hewlett-Packard, P.O. Box 85, CH-1217 Meyrin 2, Geneva, Switzerland. In Japan: Yokogawa-Hewlett-Packard, 1-59-1, Yoyogi, Shibuya-ku, Tokyo, 151.